



Oliu-1, Armando

From: Oliu-1, Armando
Sent: Thursday, January 16, 2003 3:34 PM
To: Abner, Charlie; 'Adams, Randall'; 'Ayotte, William'; Blue, John B; 'Brown Kenneth'; 'Buckingham, Bruce'; Bulloch-1, Steve; Bursian, Henry; 'Byrne, Greg'; Chitko, Pete J.; 'cookjh@thiokol.com'; 'Derry Steve'; 'Disler, Jon'; 'Disler, Jon (2)'; 'Eastwood Martin'; Estrada-1, Carlos; 'Fricke, Robert'; Gaetjens, William; Glenn-1, Malcolm; 'Gomez Reynaldo'; 'GRP DOC Mission Support Room'; Guidi-1, John; Hawkins, Tyrell; Herman, Robert S; Herst, Terri; Holloway, Darrell L; 'Holmes Steve'; Huff, Joy N.; 'Jay.Sambamurthi@msfc.nasa.gov'; Jones-1, Frank; Kelley-1, David; 'Khodadoust, Abdollah'; Kienitz, Fred; 'Kinder Gerald'; 'Koenig Lisa'; 'Kopfinger, Philip A'; Lafleur, Tom C; Leggett, Kenneth D; Leinbach-1, Mike; 'Linda Ham'; 'Mango, Ed'; 'McClymonds, Jack'; 'MCCORMACK, DONALD L. (DON) (JSC-MV)'; Mosteller-1, Ted; Mulligan-1, Melanie; Nguyen-1, Bao; 'O'Farrell Mike'; 'Ortiz Carlos'; 'Otte Neil'; 'Otto, Scott'; 'Page, Robert'; Payne-1, Michael; 'Ramirez, Juan'; Revay, Kenneth P; 'Rieckhoff, Tom - PC'; 'Rieckhoff, Tom - UNIX'; 'Roe Ralph'; 'Schomburg Calvin'; 'Schricker, B.'; 'snichols@hq.nasa.gov'; Sofge, Al (NASA HQ); 'Speece, Robert'; Stevenson-1, Charlie; 'Stone, Jeff'; Tenbusch-1, Ken; Wells-1, Joel; Wilson, Thomas F.; Rivera, Jorge; Greenwell-1, Shawn; Oliu-1, Armando; Crisafulli, Anthony; Brewer, Raymond J; Marren, Tom; Thompson-1, Becky J.; Key, John; Lorick, Vicky K; Champagne, Lorraine C; Kent, William T. "Tim"; Spaulding-1, Jeff; Altemus-1, Steve; Mullins, Michael B; Powell, Doug; Cross, Donald G
Subject: STS-107 Post-Launch Video Review and Post-Launch MLP/Pad Inspection



107video-launch.pdf



107mlp.pdf

STS-107 LAUNCH DAY VIDEO REVIEW
NASA-KSC Ice/Debris Team
16 January 2003

Significant Anomalies

None

Minor Anomalies

None.

Funnies

None.

Observations

Numerous pieces of ice from the ET/ORB umbilical shook loose, but no damage was detected. (OTV 009, 054, 063)

Several pieces of purge umbilical purge barrier fell during SSME ignition. (OTV 009, 054, 063)

Free burning hydrogen was observed under the body flap. (OTV 063)

LH2 and LO2 T-0 umbilical disconnect was normal. (OTV 049, 050).

Frost was visible around -Y ET GOX vent louver. (OTV 061)

Pieces of aft skirt instafoam ejected out of the SRB plume during ascent (TV-4)

GH2 vent line retraction and latch appeared nominal (OTV 060)

ET aft dome charring was visible. (TV 13)

Frost on LO2 tank visible. (OTV 061, 071, TV-4, TV-7)

Notes

A total of 19 videos were made available for review.

Review of long range tracking films and high-speed pad cameras is scheduled to begin Friday, January 17, 2003.

Armando Oliu
NASA-KSC

STS-107 POST LAUNCH PAD DEBRIS INSPECTION REPORT
KSC Debris Team
16 January 2003

The post launch inspection of the MLP-1, Pad A FSS, RSS, north flame trench, and Pad A apron was conducted on 16 January 2003 from Launch + 1.50 to 3.50 hours (1200 to 1400 EST).

No flight hardware was found.

Orbiter liftoff lateral acceleration data to predict stud hang-ups received from Boeing-Huntington Beach indicated that no SRB holddown stud hang-up had occurred, the reported value was 0.130. Inspection was performed and the south holddown studs were visually assessed as having no indication of hang-up. Erosion was typical for both the north and south posts. North holddown post blast covers and T-0 umbilical exhibited minimal exhaust plume damage. Both SRB aft skirt GN2 purge lines were intact and erect, protective tape layering was partially eroded.

The LO2 and LH2 Tail Service Masts (TSM) appeared undamaged with both bonnets observed to have closed properly. The MLP deck was generally in good shape. Two broken bolts were found on the center raised deck ramp and one screw was missing from the joint plate, this screw was found on the north flame trench.

The GH2 vent line latched on the eighth tooth on the latching mechanism. The GUCP 7-inch quick disconnect was accessible for inspection and appeared to be undamaged with sealing surface in good shape. The deceleration cable was in nominal configuration and the vent line blanket was sooted.

The OAA appeared to be intact with no evidence of plume impingement.

All slidewire baskets were secured with no evidence of damage.

The GOX vent arm, ducts and structure appeared to be in nominal condition

Debris findings included:

RSS-207 Level- two steel line clamps, two dog tags, five OIS box plugs
FSS-175 Level- broken OIS box
Front of elevator base- one nut (1/2 inch-dia)
Pad apron- SRB plug material, small alligator clip, and pieces of rusted metal
North flame trench- deflector exhibited nominal erosion

Overall damage to the pad appeared to be nominal. Photos will be available on SIMS.

Jorge E. Rivera NASA-KSC
Mark Wollam USA
Doug Powell Lockheed-Martin LSS
Duane Leggett Boeing Integration